Essentially chromium-free method for passivating metallic surfaces consisting of Zn, Zn alloys, Al or Al alloys

Abstract

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The present invention relates to a substantially chromium-free process for passivating metallic surfaces of Zn, Zn alloys, Al or Al alloys by treating the surface with an acidic aqueous formulation which comprises at least one substantially noncrosslinked, water-soluble polymer or copolymer containing at least 50% by weight of (meth)acrylic acid units and comprises water or an aqueous solvent mixture comprising at least 50% by weight of water, and by further treating the surface with at least one water-soluble crosslinker comprising at least 2 crosslinking groups selected from the group consisting of azirane, oxirane, and thiirane groups. The invention further relates to passivating layers obtainable by means of the process and to a formulation suitable for this process.